
A NEW SPECIES OF *MACROLOBIUM* (FABACEAE: CAESALPINIOIDEAE) FROM MESOAMERICA

In the course of botanical exploration in the region of Cerro Coronel in northeastern Costa Rica in 1986 and 1987, botanists from the Missouri Botanical Garden and the Museo Nacional de Costa Rica made many collections from this isolated group of low rolling hills. Two species of *Macrolobium* were collected, *M. costaricense* W. Burger and an undescribed and closely related one which is here named in honor of Gerardo Herrera, an astute and energetic Costa Rican botanist and co-collector of the type gathering.

In the last revision of the genus *Macrolobium* (Caesalpinioideae-Amherstieae) Cowan (1953) recognized 48 species. Since then, 22 additional species have been added, 19 of them by Cowan, the majority from previously unexplored areas of Venezuelan Guayana (TROPICOS, 1989). *Macrolobium* is considered to be wholly neotropical, the African taxa previously considered as part of the genus having been relegated mostly to the African genera *Gilbertiodendron* and *Anthonotha* by J. Léonard (see Cowan & Polhill, 1981). Of the 25 genera recognized for the tribe Amherstieae, only *Macrolobium* and *Dicymbe* are native to the New World.

Although not a single Costa Rican specimen of *Macrolobium* was known to Cowan in 1953, two species from that country have since been described by Burger (1968) and Cowan (1985), *M. costaricense* and *M. hartshornii*, respectively. Both of these species, as well as the new taxon described herein, are members of sect. *Stenosolen* Harms and have leaves with few to many pairs of leaflets. Other closely related species are *M. trinitense* Urban from Trinidad, *M. stenosphon* Harms of Pacific coastal Colombia and adjacent Ecuador, and *M. colombianum* (Britton & Killip) Killip, with six varieties, in northwestern South America and Panama.

Macrolobium herrerae Zarucchi, sp. nov. TYPE: Costa Rica. Limón: hills 2 airline km SSE of Islas Buena Vista in the Río Colorado, 14 airline km SW of Barra del Colorado, pre-montane wet forest on low hills, 10°40'N, 83°40'W, 10–120 m, 13–14 Sep. 1986 (fl),

Gerrit Davidse & Gerardo Herrera 31126 (holotype, MO; isotypes, AAU, CR n.v., F, K, MEXU, NY, US). Figure 1.

Species *Macrolobium costaricense* W. Burger et *M. hartshornii* Cowan similis, sed foliolis plerumque 6–7-jugis, foliolis distalibus iis jugorum medianorum haud majoribus, hypanthio parvo, et gynoeccio dense tomentoso abstans.

Small or medium-sized tree to 25 m. Branchlets dark purplish, essentially glabrous, sparingly lenticellate. Stipules absent or possibly early caducous. Leaves 8.5–12(–15) cm long with (5–)6–7 pairs of leaflets, petiole (3–)5–12 mm long with the rachis not extending past the terminal pair of leaflets; rachis narrowly winged with the upper surface flat or slightly canaliculate, sparingly pubescent; leaflets sessile to subsessile, 5–7(–8) × 1.4–2(–2.3) cm, elliptic and generally becoming falcate, moderately to strongly inequilateral at the base, apex acuminate and ultimately retuse, both surfaces glabrous except for the sparingly tomentose midrib above; midvein of leaflets slightly impressed above, prominent below, secondary venation discernible on both surfaces. Inflorescences axillary, generally on older branches at leafless nodes or where older leaves persist, racemose, dense; axis 5–10(–15) mm long, often several to many inflorescences densely clustered; pedicels 3–4 mm long, finely pubescent. Bracteoles ca. 4 mm long, connate for ½–⅔ of their length, splitting and persistent through early fruit development. Flowers with the hypanthium cylindrical, 3–4 mm long, ca. 1 mm in diameter, glabrous, the stipe 1–2 mm long; sepals 4, elliptic to elliptic-oblong, 4–5 × 1.5–2 mm, unequal with the dorsal one wider than the rest, glabrous; single petal obovate, undulate, 13–16 × 7–8 mm, basally obtuse, apically rounded, glabrous, white with yellow lines; stamens 3, the filaments 13–15 mm long, villosulose along the basal third, purple; anthers versatile, ca. 1.5 mm long; gynoeccium slightly sigmoid; ovary ca. 3 × 1 mm, very densely tomentose; gynophore 2–3 mm long; style 9–12 mm long, very thin, terete; stigma capitellate. Fruit 8–10 × 2.5–3.3 cm, narrowly elliptic-oblong or slightly obovate, glabrous, the margins slightly thickened, attached obliquely

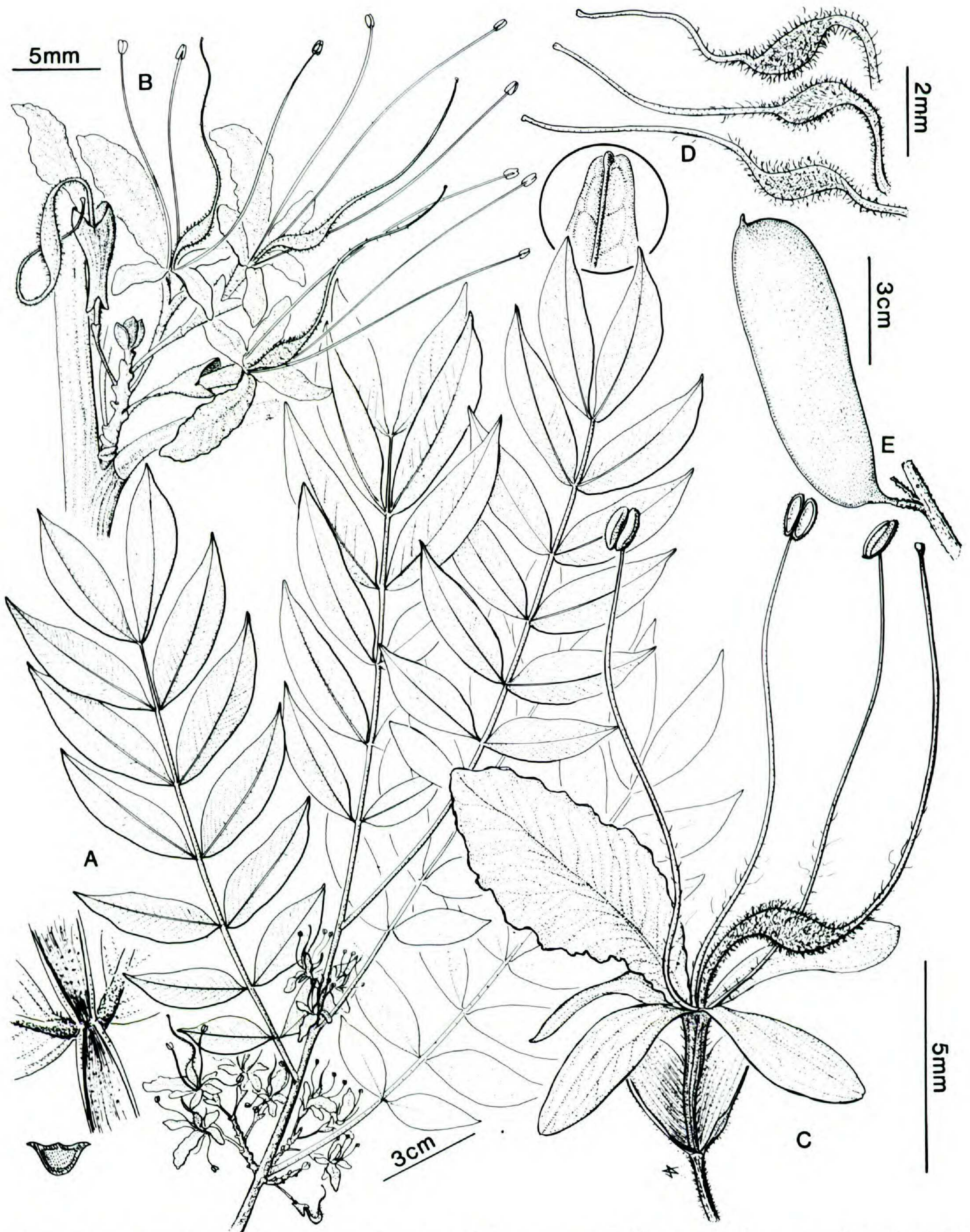


FIGURE 1. *Macrolobium herrerae*. — A. Habit. — B. Inflorescence. — C. Flower. — D. Gynoecia. — E. Fruit. (A–D after Davidse & Herrera 31126, E after Alduvín 160).

at the rounded base to a stipe 5–7 mm long, the acumen 1.5–3 mm long. Seeds 2–4 per fruit, oval, flattened, immature.

Paratypes. HONDURAS. ATLÁNTIDA: Aldea El Pino a 10 km de La Ceiba, faldas del Cerro Pico Bonito, 2 Apr.

1977 (fr), *Carolina Alduvín 160* (MO, ?TEFH n.v.). COSTA RICA. LIMÓN: Cerro Coronel, E of Río Zapote, along and above new road within 1 km of Río Colorado, tall evergreen forest and edge of *Raphia* swamp on gentle to moderate slopes, 10°40'N, 83°40'W, 10–40 m, 13–14 Sep. 1986 (fl), *W. D. Stevens & O. M. Montiel 24327* (CR n.v., F, MEXU, MO).

This new species is apparently most closely related to *Macrolobium costaricense*, also collected in the vicinity of Cerro Coronel, and additionally known from Panama and the Department of Antioquia in Colombia. The single available fruiting collection of *M. herrerae* (Alduvín 160) is the northernmost record (ca. 16°N) for the genus. The new species is best distinguished from *M. costaricense* by having a densely tomentose ovary and more numerous pairs ([5-]6-7) of leaflets with the distal pair more or less equal in size to those attached lower on the rachis. In *M. costaricense* the terminal pair of leaflets is larger. Also, the fruit of *M. costaricense* has valves markedly broader toward the apex, whereas the valves in *M. herrerae* may be only slightly wider distally. *Macrolobium herrerae* differs from all varieties of *M. colombianum* by the densely tomentose ovary and generally smaller floral parts, especially the hypanthium.

Since *Macrolobium herrerae* was collected along the Costa Rica-Nicaragua border in tropical wet, evergreen forest and is also known from Honduras, it probably occurs in Nicaragua.

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